

convinced that the practice is desirable? What harm and what virtue is there in it? Are there well-recognized disorders and diseases which may be relieved by subjecting the body tissues to a rather continuous alkaline bath and, if so, should definite quantity and time limits be designated?

Or have we been drifting into easy acquiescence, thinking there may possibly be some good, or at any rate little harm in such waters, satisfied that our arthritic or hypertension patients have something to play with even though they may have carried away the conviction that a large and continuous consumption is greatly to be desired and is a measure of first therapeutic importance?

It is not uncommon to find patients with hypertension, many with definite impairment of kidney function, using one or two quarts of some popular alkaline water daily for periods of one or two years, believing firmly that this practice is necessary and even life-saving. Some of these people have adopted the usage of such waters because they have read certain advertising literature—too many, perhaps, owing to the direction and encouragement of their medical advisors. There is apparent a great popular misconception and bugaboo about “acid conditions” alleged to exist in the human body and a general tendency to ascribe to such nameless disorders a multitude of symptoms and dysfunctions that by careful analysis can be explained otherwise.

The conditions of acidosis, alkalosis, and the maintenance of the acid-base equilibrium in the body are only beginning to be understood. Much more careful experimental work remains to be done before we can be too dogmatic on the subject. There seems to be fairly general agreement, however, that with normal renal function the mechanism of neutrality regulation is very efficient and any excess of alkali is excreted and otherwise compensated for without any disturbance of the acid-base equilibrium. But in patients with disturbed renal function it is not difficult to induce an alkalosis, even when a preceding state of acidosis has existed, as such kidneys may be as inefficient in getting rid of an excess of alkali administered as they were in excreting the normal excess of acid. Alkalosis and tetany have been brought about in certain patients on therapeutic alkaline régimes. Recent experimental work on animals has shown that on highly alkaline régimes blood cells, albumen, and casts may appear in the urine, while with proportionate amounts of acids such conditions do not obtain. Continuously neutral or alkaline urines may also favor the formation of renal calculi. While there is no statistical evidence to prove this contention, at least our renal specialists uniformly attempt to keep the urine acid even to the extent of administering acids as a prophylaxis.

The question also naturally arises as to the final effect on the gastrointestinal tract and the processes of digestion of a continuous neutralization of the hydrochloric acid. If a specific object is to be obtained, such as the control of a peptic ulcer, we may accept certain harmful effects of an alkaline régime, if the cost is not too high, for the sake of the greater good accomplished, just as we do in the use of mercury in the control of syphilis. The use of alkaline waters seems desirable and even benefi-

cial in the acidosis of acute infections, in some acute abdominal upsets with vomiting, in certain bladder and renal pelvic conditions, and for symptomatic purposes in many disorders. But the advisability of their use over a considerable period of time and in many of the more chronic metabolic diseases would seem questionable.

FRED H. KRUSE.

Neurosurgery

LOCALIZATION of Tumors of the Brain—In the early days of surgery of the nervous system the surgeon was purely an operator acting under the guidance of the neurologist, who took the responsibility for the localization of the lesion and for the extent of the operative procedure. Today there are many men who devote most or all of their time to neurosurgery, and, as a result of this specialization, technique has improved and operative mortality is much lower. In a constantly increasing number of patients it is possible to observe gross pathological changes in the living tissues, and to correlate them with the clinical findings. But before a tumor can be exposed at operation it must be localized. The neurologist was at first almost entirely dependent on the history and the clinical findings in making his diagnosis and localization. Valuable help has come from the roentgen ray, and stereoscopic films of the skull now reveal much that was not seen in the old plates. Calcification in tumors is demonstrated quite frequently; it is no longer difficult to determine whether the sella turcica shows pathological changes; proliferation of the skull over a dural tumor may be an ingrowth of new bone, impossible to detect except with the roentgen ray; and localized erosions of the skull are frequently significant.

The most important advance came with the introduction of cerebral pneumograms or ventriculograms by Dandy of Baltimore in 1918. Cerebrospinal fluid is withdrawn from the ventricles, and air is injected in its place. Roentgen rays then give a picture of the ventricular system, because the air casts no shadow. All tumors of the brain which give symptoms of pressure produce distortion or change in the size, shape or position of the ventricles. Dandy says that ten years ago less than 50 per cent of tumors of the brain could be exposed at operation; that now exposure is possible in 65 per cent because of better roentgen rays, better surgery and increased experience; and that *all* the remaining 35 per cent can be localized by the cerebral pneumogram. Have others been able to confirm this statement? Grant⁴ has collected 392 cases from the records of several neurosurgeons. The method was of value in 311 cases, but in 218 it confirmed a neurological diagnosis, or was unverified, or ruled out a suspected tumor. Ninety-three tumors were localized and exposed at operation solely through the aid of the pneumogram. There were errors of technique in 10 per cent of the cases, and the mortality was 8 per cent. But the mortality of unlocalized tumors is 100 per cent, and of the ninety-three tumors which could not have been local-

4. Grant, Francis C.: Ventriculography, Arch. Neurol. and Psychiat., 14:513 September, 1925.

ized otherwise, forty-four were removed at operation. Grant's figures substantiate Dandy's claims, if we allow for inexperience with a new method. It is fair to conclude that, in the hands of those competent to do a cerebral pneumogram and to interpret the findings, it will reduce almost to the vanishing point the number of tumors of the brain which cannot be localized and exposed at operation.

E. B. TOWNE.

THE increasing number of those specializing in limited fields of medicine and surgery has been a cause of considerable concern to physicians and the public. One outstanding asset of specialization is the impetus given the fund of knowledge in that special field. Progress will be fastest and safest when men concentrate their interests and energy. Before diagnostic and therapeutic measures can be standardized there must be much pioneer work.

The fourteenth meeting of the Society of Neurological Surgeons was held in St. Louis recently. This was an occasion for an editorial in the Missouri State Medical Association Journal. The rapid growth and advance of this specialty are of interest to the profession and laity as well. Only a few years ago surgery of the nervous system was considered an interesting but impractical field, much as the present generation regards cardiac surgery. Twenty years ago a few men, probably less than five in this country, majored their chief interests in this specialty. Today nearly every medical school has a well-organized department of neurological surgery. The pioneers have assaulted barriers of prejudice, inexperience, and technical difficulties almost insurmountable. The ingenuity, skill, courage and tenacity of Horsley, Cushing, Frasier, and others should be an inspiration to future adventures into what appears to be forbidding and unpromising fields.

Surgery was the means of correcting many a mistaken idea regarding abdominal physiology and pathology. This statement can be repeated with added emphasis in the neurological field. Improved technical methods allow cranial and spinal explorations to be carried out with comparative safety. Operative mortality is greatly reduced in spite of more extensive and venturesome surgery. Physicians are stimulated to make an early diagnosis in the tumor or abscess case in the hope of radical cure rather than await the postmortem findings to disprove or substantiate their contention. Correlation of the clinical picture, the operative findings and the microscopic pathology have added tremendous knowledge as regards diagnosis, treatment, and prognosis. Doctors Cushing and Bailey have recently published an extensive monograph on gliomas that is most enlightening. Gliomas formerly classified in one group are now divided as to pathology, and a prognosis can be given with some exactness. There are still wide gaps in our knowledge of this field and great technical difficulties to be overcome. Progress to date, however, would seem to promise much for the future development.

HOWARD W. FLEMING.

Neuropsychiatry

THE Therapeutic Problems of General Paralysis—Kirby and Bunker, in the October number (last published) of the *American Journal of Psychiatry*, present an exceptionally thorough report upon a series of cases of general paralysis treated by malarial infection. Inasmuch as one out of every ten patients admitted to hospitals for mental patients suffers from this dread disease, the mentioned, and many other previously reported, efforts are to be commended. However, it is essential that we correctly evaluate the entire therapeutic problem of the disease.

1. We are evidently obtaining fairly frequent and prolonged apparent arrests in the progress of the disease. Naturally they must be called "remissions" until time justifies other conclusions. These remissions, quite alike in type but perhaps shorter and less common, were seen before the days of malarial and similar therapy—in fact before we knew arsphenamin. They appeared to follow vigorous catharsis; at times they just came—we knew not why. They were interpreted as proof that the bulk of symptomatology rested upon toxic, rather than degenerative, structural, foundation.

2. These remissions would endure for days, weeks, months—rarely for years. Eventually always a renewed fury of the disease made short work of the victim. Only very superficial observers ever claimed full restoration of physical and mental normal during these remissions. Always there could be shown a degree of residual, permanent physical and mental impairment. We find no grounds for assuming the present-day therapy to be fundamentally more effective.

3. One may concede a rare exception, but clinical experience has shown that when the neuropsychiatrist first meets the general paralytic, sufficient cortical neuropathological change has already taken place to make complete restoration of function impossible. With all unaffected tissue restored at that moment the patient would be found permanently lacking in his finer, most valuable mental activity.

4. We are forced to the inevitable conclusion that up to and including our present-day efforts our therapy comes too late. In a measure, perhaps the general practitioner fails to follow his syphilitic patients sufficiently closely to discover the early neurologic (pupillary, etc.) and spinal fluid changes. More likely it is because we know so little of certain important elements of etiology. Why are the syphilitics of certain races (Java, Turkey, Algiers, etc.) almost immune to general paralysis? Why has Croatia and Slavonia of Yugoslavia the average percentage of paretics while the closely related Bosnian neighbor is almost free from it?

What constitutes individual and racial immunity? How may we safeguard the syphilitic from the parenchymatous invasion? Is it not possible that in our anxiety to kill the spirochetes we reduce